

FESTOONFLEX C-PUR-HF D12YC11Y: low voltage screened round cables PUR sheathed for festoon application



Application

For use as energy and control cable in festoon systems under severe conditions, incl. frequent bending. Also for drag lines, machine tools or materials handling systems.

Global data

Brand	FESTOONFLEX C PUR-HF
Type designation	D12YC11Y-J/O

Design features

Conductor	Plain copper, flexible class 5 acc. to DIN EN 60228 / DIN VDE 0295
Insulation	Halogen free compound, based on polyester
Core identification	Up to 5 cores: colored in accordance with DIN VDE 0293-308 From 6 cores: natural color with black numbers
Core arrangement	Cores/Pairs twisted with short length of lay around central element
Inner sheath	Due to technical reasons some of the cross section are produced with an additional polyurethane inner sheath
Screen over inner sheath	Braid of tinned copper wires
Outer sheath	Polyurethane, halogen free, flame retardant; Colour: black (opaque).
Marking	White imprint: FESTOONFLEX C-PUR-HF -J/-O (number of cores) x (cross-section) (year/week)

Electrical parameters

Rated voltage	0.6/1 kV (600/1000V)
Max. permissible operating voltage AC	0.7/1.2 kV
Max. permissible operating voltage DC	0.9/1.8 kV
AC Test Voltage	4 kV (5 Min.)
Current Carrying Capacity description	Acc. to DIN VDE 0298-4

Chemical parameters

Resistance to fire	Similar to IEC 60332-1
Water resistance	The cables are suitable for permanent use in water (no drinking water) up to 50 meter diving depth.

Thermal parameters

Max. permissible temperature at conductor	90 °C
Max. short circuit temperature of the conductor	250 °C
Ambient temperature for fixed installation	min -50 °C ; max +80 °C
Ambient temperature in fully flexible operation	min -40 °C ; max +80 °C

Mechanical parameters

Max. tensile load on the conductor	15 N/mm ²
Torsional stress	Not allowed
Min. bending radius	6 x D (Proved by flexing tests acc. to HD 22.2 part 3.1)
Travel speed	- In festoon systems: up to 210 m/min; - In chain systems: up to 210 m/min (note: trouble free operation is influenced by several factors, among all the chain length. For long chain system we recommend to operate at lower speed).

Number of cores x cross section	Part number	Conductor diameter max. mm	Outer diameter min. mm	Outer diameter max. mm	Bending radius free moving min. mm	Weight (ca.) kg/km	Permissible tensile force max. N	Conductor resistance at 20°C max. Ω/km	Current carrying capacity for install. free in air (2) A	Short Circuit Current (conductor) kA
D12YC11Y-O screened power cables, single core										
1x25		6.2	10.3	11.5	69	330	370	0.78	138	3.58
1x35	20161370	7.8	12.3	13.5	81	430	520	0.55	170	5.01
1x50		8.9	15.4	16.6	100	610	750	0.39	212	7.15
1x70	20157795	11.1	17.0	18.3	110	810	1050	0.27	263	10.01
1x95		12.6	18.9	20.1	121	1030	1420	0.21	316	13.59
1x120	20156875	14.8	21.4	22.8	137	1320	1800	0.16	370	17.16
1x150		16	23.1	24.5	147	1650	2250	0.13	424	21.45
1x185		17.7	25.5	27.2	163	2000	2770	0.11	484	26.46
1x240		20.2	28.5	30.1	181	2490	3600	0.08	567	34.32
D12YC11Y-J screened power cables, four core										
4x1,5		1.5	10.8	12	72	240	90	13.3	24	0.21
4x2,5	20166386	2	12.1	13.2	80	250	150	7.98	32	0.36
4x4		2.6	13.6	14.7	89	330	240	4.95	43	0.57
4x6	20161501	3.2	15.1	16.3	98	420	360	3.3	56	0.86
4x10		4	18.4	19.6	118	640	600	1.91	78	1.43
4x16	20166385	5	21.2	22.5	136	940	960	1.21	104	2.29
4x25		6.2	24.5	26.2	157	1360	1500	0.78	138	3.58
4x35	20168451	7.8	29.6	31.6	190	1870	2100	0.55	170	5.01
4x50		9.6	35.1	37.6	226	2560	3000	0.39	212	7.15
D12YC11Y-J screened power cables, five core										
5x1,5		1.5	10.9	12.1	73	250	110	13.3	24	0.21
5x2,5		2	12.8	14	84	280	180	7.98	32	0.36
5x4		2.6	13.8	15	90	345	300	4.95	43	0.57
D12YC11Y-J screened control cables										
7x1,5	20166387	1.5	10.9	12.1	73	220	150	13.3	24	0.21
12x1,5	20156247	1.5	15	16.2	97	360	270	13.3	24	0.21
18x1,5	20157796	1.5	15	16.2	97	420	400	13.3	24	0.21
12x2,5		2	17.4	18.6	112	530	450	7.98	32	0.36
18x2,5		2	17.5	18.8	113	650	670	7.98	32	0.36
D12YC11Y-O overall screened control pairs										
3x(2x1,5)		1.5	16.5	17.8	107	350	130	13.3	24	0.21
4x(2x1)		1.3	15.3	16.5	99	310	120	19.5	19	0.14
4x(2x1,5)		1.5	17.2	18.5	111	385	180	13.3	24	0.21
D12Y11Y-O individually screened control pairs										
4x(2x1)C	20161461	1.3	15.9	17.1	103	350	120	19.5	19	0.14
6x(2x1)C	20160120	1.3	19.0	20.3	122	480	180	19.5	19	0.14
9x(2x1)C		1.3	23.6	25	150	721	270	19.5	19	0.14
2x(2x1,5)C		1.5	15.2	16.4	98	280	90	13.3	24	0.21

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2x(2x2,5)C		2	17.2	18.5	111	340	150	7.98	32	0.36
3x(2x1,5)C	20156880	1.5	17.2	18.5	111	350	130	13.3	24	0.21
3x(2x2,5)C		2	17.5	18.8	113	390	220	7.98	32	0.36

(2) Nominal current carrying capacity for rubber cables installed free in air, at 30°C ambient temperature (see also technical appendixes). For articles without part number the values shown are approximate, and need to be confirmed in case of order.